United States Government **Department of Energy**

Bonneville Power Administration

DATE: December 8, 2004

REPLY TO ATTN OF: KEP-4

SUBJECT: Supplement Analysis for the Transmission System Vegetation Management Program FEIS (DOE/EIS-0285/SA-236) Olympia-Satsop Project #:: **V-O-05/03**

Jim Jellison – TFO
Natural resource specialist

Proposed Action: Vegetation Management along the Olympia-Satsop No. 2, 230 kV (Reference line) Transmission Line Corridor from structures 6/1 to 26/3.

Location: The project line is located in Thurston and Grays Harbor counties Washington, from 6 miles west of the city of Olympia to near the city of Elma. The project is located in BPA's Olympia Region.

Proposed by: Bonneville Power Administration (BPA).

Description of the Proposal: BPA proposes to remove tall growing and noxious vegetation from the right of way and access roads that can potentially interfere with the operation, maintenance, and reliability of the transmission lines. Unwanted, tall growing, and noxious vegetation, danger trees, and reclaim trees will be removed and/or controlled inside the ROW using selective and nonselective methods that may include hand cutting, mowing, and herbicidal treatment. Vegetation management work will occur between structures 6/1 to 26/3 of the Olympia-Satsop No. 2 transmission line. This proposal covers approximately 1068 acres of land and encompasses the entire easement widths of all the transmission lines within the Olympia-Satsop No. 2, 230 kV (reference line) line corridor.

Analysis: A Vegetation Management Checklist was completed for this project in accordance with the requirements identified in the Bonneville Power Administrations Transmission System Vegetation Management Program FEIS (DOE/EIS-0285).

The subject corridor traverses public and private lands in Thurston and Grays Harbor Counties Washington. Landowners include Washington State DNR, private timber companies, and private rural residential lands. No tribal lands are involved.

Section 3 of the checklist identifies the natural resources present in the area of the proposed work. The following summarizes natural resources occurring in the project area along with applicable mitigation measures.

Water Resources: Water bodies (streams, rivers, lakes, wetlands) occurring in the project area are listed in section 3.1 of the Vegetation Management Checklist. Trees in riparian zones will be selectively cut to include only those that are within 50 feet of the conductor at maximum sag. Trees will be topped where shrubs are not present to provide shade and a silt buffer.

No ground disturbing vegetation management methods will be implemented thus minimizing the risk for soil erosion and sedimentation near the streams. The following herbicide buffers will be implemented for the project. Outside a 100' buffer from any steam, ponds, or wetlands Triclopyr BEE (common formulations, Garlon 4 & Tahoe 4E) may be applied. Formulations of Triclopyr TEA (common formulations Garlon 3A & Tahoe 3A) may be applied for spot or localized applications up to the waters edge. For any initial or follow up broadcast treatment with Triclopyr TEA on sprouting stumps or brush a 35' buffer will be maintained from any steam, ponds, wetlands, or sensitive areas.

No drinking water, irrigation wells, or water supplies were identified along the rights of way.

Threatened and Endangered Species/Essential Fish Habitat: Pursuant to its obligations under the Endangered Species Act, BPA has made a determination of whether its proposed project will have any effects on any listed species. A species list was reviewed from the United States Fish and Wildlife Service (USFWS) on November 23rd, 2004, identifying threatened and endangered species and Critical Habitat Units potentially occurring in the project area. In addition a review of species under the jurisdiction of NOAA Fisheries was conducted. A determination of "No Effect" was made for all ESA listed species and designated critical habitat for the project. A determination of "No Effect" was made for Essential Fish Habitat waters that occur in the project area.

Cultural Resources: No cultural resources are known for the project area. If a site is discovered during the course of vegetation control, work will be stopped in the vicinity and the appropriate tribe, the BPA Environmental Specialist, and the BPA archeologist will be contacted.

Monitoring: The entire project will be inspected during the work period. Additionally the line will be patrolled annually after treatment to monitor the effectiveness of the treatment and any issues associated with the project.

Findings: This Supplement Analysis finds that (1) the proposed actions are substantially consistent with the Transmission System Vegetation Management Program FEIS (DOE/EIS-0285) and ROD, and; (2) there are no new circumstances or information relevant to environmental concerns and bearing on the proposed actions or their impacts. This Supplement Analysis also finds the proposed actions will not affect threatened or endangered species. Therefore, no further NEPA documentation is required.

/s/ James R. Meyer for
Greg P. Tippetts
Physical Scientist (Environmental)

CONCUR: */s/ Thomas C. McKinney* DATE: 12/10/2004
Thomas C. McKinney
NEPA Compliance Officer

Attachment:
Vegetation Management Checklist
Effects Determination

cc:
L. Croff – KEC-4
T. McKinney – KEC-4
J. Meyer – KEP-4
J. Sharpe – KEPR-4
G. Tippetts – KEPR/Olympia
P. Key – LC-7
J. Hilliard Creecy – T-DITT2
K. Rodd – TF/DOB-1
D. Krauss – TFO/Olympia
T. Grover – TFOF/Olympia
Environmental File – KEC-4
Official File – KEP-4 (EQ-14)

Gtippetts:tmb:4722:12/6/2004 (KEP-KEPR/OLYMPIA-W:\EP\2005 FILES\EQ-14-Supplement Analysis\FEIS-0285-SA-236-Olympia-Satsop 05.doc)

Vegetation Management Checklist
Olympia-Satsop Corridor

Project#: V-O-05/03

1. IDENTIFY FACILITY AND THE VEGETATION MANAGEMENT NEED

1.1 Describe Right-of-way.

Corridor Name	Corridor Length & kV	Easement width	Miles of Treatment
Olympia-Satsop No. 2, 3 Paul-Satsop No. 1, Olympia-South Elma No. 1and S. Elma-Satsop Park No. 1 ADNO's 8320, 8322, 8324,8341 and 8360	20 mi., 1-500, 2-230, 2-115	435, variable R/W widths	20 mi. starting at str. 6/1 to str 26/3

Right Of Way:

Right-of-Way – clearing in right-of-way

A combination of mulching the easement because of the Scotch broom and the cut, lop and scatter of tall growing species will be utilized to treat hazardous vegetation and this will be followed up with a herbicide treatment.

Transmission Structures – clearing around

All structures will be cut and chemically treated to 30 feet from the center of the pole or from the legs of each steel tower.

Access Road clearing - approximate miles – 2.67 miles

All access roads will be either C, L&S, mulched or chipped due to the encroachment of Scotch broom, blackberries, low and tall growing brush and trees then either stump or foliar chemical treatment will be applied.

1.2 Describe the vegetation needing management.

Vegetation Types:

Douglas fir	Alder	Cottonwood
True Fir	Maple	Wild Cherry
Hemlock	Willows	Noxious Weeds - Scotch Broom
Blackberries	Cascara	Wild Filbert

1.3 List measures you will take to help promote low-growing plant communities. If promoting low-growing plants is not appropriate for this project, explain why.

Cut stump or follow-up herbicide treatments on sprouting-types species will be carried out to ensure that the roots are killed. Vegetation that will grow tall will be selectively eliminated before it reaches a height or density to begin competing with low-growing species.

1.4 Describe overall management scheme/schedule.

Initial entry – All tall growing vegetation will be cut and chemically treat the stumps to prevent grow-in trees. Access, right-of-way roads and structure sites are to be cut and treated.

Subsequent entries – A follow-up chemical treatment is scheduled to begin in the late spring or early summer of 2005.

Future cycles – Every 3 years, a maintenance contract will be necessary to treat sprouts. The use of herbicides on the initial and subsequent cycles should reduce the quantity and cost of work.

2. IDENTIFY SURROUNDING LAND USE AND LANDOWNERS/MANAGERS

2.1 List the types of landowners and land uses along your corridor.

Landowners/Managers/Uses:

Rural Residential Property

Simpson Timber Company

Weyerhauser Timber Company

Washington State DNR

Port Blakely Timber Company

Manke Lumber Company

2.2 Describe method for notifying right-of-way landowners and requesting information (i.e., door hanger, letter, phone call, e-mail, and/or meeting). Develop landowner mail list, if appropriate.

Olympia Region will send letters to the property owners about 2-4 weeks prior to cutting the brush. Door to door contact will be made where it is warranted.

2.3 List the specific land owner/land use measures — determined from the handbook or through your consultations with the entities — that will be applied.

Span		Landowner/use	Specific measures to be applied
From	To		
8/5 + 300	1150	Private Landowner	Xmas tree agreement, LU# 20010496
23/2+950	1166	Private Landowner	Application for Orchard and Nut Trees
23/3+0	150	Private Landowner	Application for Orchard Trees
23/5+875	1075	Private Landowner	Xmas trees, no agreement
24/2 + 800	1156	Private Landowner	T&B Agreement LU#84088
24/3 + 0	300	Private Landowner	T&B Agreement LU#84088

2.4 Review any existing landowner agreements (e.g. tree/brush Permits or Agreements). List in table above any provisions that need to be followed and where they are located.

I need to work with the property owners who do not have an approved Xmas tree agreement and request that they submit an application for a formal agreement.

2.5 List any known casual informal use of the right-of-way by non-owner publics. List any constraints or measure's to take due to the informal use.

Candy Mountain ORV Park trailhead parking lot 300' back on line of structure 8/3.

2.6 List other potentially affected people, agencies, or tribes (that are not landowners/managers) that need to be notified or coordinated with. Describe method of notification and coordination.

I have contacted Tom Strong, Cultural Resource Specialist of the Skokomish Tribe his knowledge of any cultural sites on the Longview-Chehalis#3 easement. He is not aware of any cultural sites.

3. IDENTIFY NATURAL RESOURCES

3.1 List any water resources (streams, rivers, lakes, wetlands) that may be impacted by vegetation control activities. For each water body describe the control methods and requirements or mitigation measures that will be used.

Span		Water body	T&E/ EFH	Method	Herbicide	Application Technique	Buffer	Other
From	To							
6/3+35	105	No name creek	No	Cut & Stump treat	Garlon 3A/Escort or Arsenal	Spot Treat w/in buffer	Waters Edge	Selective Cutting
6/3+700	775	No name creek	No	Cut & Stump treat	Garlon 3A/Escort or Arsenal	Spot Treat w/in buffer	Waters Edge	Selective Cutting
6/4 +400	475	No name creek	No	Cut & Stump treat	Garlon 3A/Escort or Arsenal	Spot Treat w/in buffer	Waters Edge	Selective Cutting
6/5+415	485	No name creek	No	Skip	Garlon 3A/Escort or Arsenal			
6/5+615	685	No name creek	No	Cut & Stump treat	Garlon 3A/Escort or Arsenal	Spot Treat w/in buffer	Waters Edge	Selective Cutting
7/3+1000	1100	Wetlands	No	C,L&S	Garlon 3A/Escort or Arsenal	Spot Treat w/in buffer	Waters Edge	Selective Cutting
7/4+715	785	No name creek	No	Cut & Stump treat	Garlon 3A/Escort or Arsenal	Spot Treat w/in buffer	Waters Edge	Selective Cutting
7/5+650	900	Wetlands	No	C, L&S	Garlon 3A/Escort or Arsenal	Spot Treat w/in buffer	Waters Edge	Selective Cutting
8/1+300	750	Wetlands/ Pond	No	C, L&S	Garlon 3A/Escort or Arsenal	Spot Treat w/in buffer	Waters Edge	Selective Cutting
8/1+300	750	No name creek	No	Cut & Stump treat	Garlon 3A/Escort or Arsenal	Spot Treat w/in buffer	Waters Edge	Selective Cutting
8/3+0	1200	Wetlands	No	C,L&S	Garlon 3A/Escort or Arsenal	Spot Treat w/in buffer	Waters Edge	Selective Cutting

8/4+0 O-S#3 &O-SE	150	Wetlands	No	C, L&S	Garlon 3A/Escort or Arsenal	Spot Treat w/in buffer	Waters Edge	Selective Cutting
8/5+65	135	No name creek	No	Cut & Stump treat	Garlon 3A/Escort or Arsenal	Spot Treat w/in buffer	Waters Edge	Selective Cutting
8/5+550	600	Wetlands	No	C, L&S	Garlon 3A/Escort or Arsenal	Spot Treat w/in buffer	Waters Edge	Selective Cutting
9/1+665	735	Kennedy Creek	No	Cut & Stump treat	Garlon 3A/Escort or Arsenal	Spot Treat w/in buffer	Waters Edge	Selective Cutting
9/3+265	335	No name creek	No	Cut & Stump treat	Garlon 3A/Escort or Arsenal	Spot Treat w/in buffer	Waters Edge	Selective Cutting
9/3+525	635	No name creek	No	Cut & Stump treat	Garlon 3A/Escort or Arsenal	Spot Treat w/in buffer	Waters Edge	Selective Cutting
9/3+1065	1135	No name creek	No	Cut & Stump treat	Garlon 3A/Escort or Arsenal	Spot Treat w/in buffer	Waters Edge	Selective Cutting
9/4+0 Parallels center	1262 of easement	No name creek	No	Cut & Stump treat	Garlon 3A/Escort or Arsenal	Spot Treat w/in buffer	Waters Edge	Selective Cutting
10/1+0	1639	No name creek	No	Cut & Stump treat	Garlon 3A/Escort or Arsenal	Spot Treat w/in buffer	Waters Edge	Selective Cutting
11/3+765	835	No name creek	No	Cut & Stump treat	Garlon 3A/Escort or Arsenal	Spot Treat w/in buffer	Waters Edge	Selective Cutting
12/2+615	685	No name creek	No	Cut & Stump treat	Garlon 3A/Escort or Arsenal	Spot Treat w/in buffer	Waters Edge	Selective Cutting
12/3+715	785	Swan Creek	No	Cut & Stump treat	Garlon 3A/Escort or Arsenal	Spot Treat w/in buffer	Waters Edge	Selective Cutting
13/2+1165	1235	No name creek	No	Cut & Stump treat	Garlon 3A/Escort or Arsenal	Spot Treat w/in buffer	Waters Edge	Selective Cutting
13/3+215	285	No name creek	No	Cut & Stump treat	Garlon 3A/Escort or Arsenal	Spot Treat w/in buffer	Waters Edge	Selective Cutting
13/3+615	685	No name creek	No	Cut & Stump treat	Garlon 3A/Escort or Arsenal	Spot Treat w/in buffer	Waters Edge	Selective Cutting
13/3+1015	1085	No name creek	No	Cut & Stump treat	Garlon 3A/Escort or Arsenal	Spot Treat w/in buffer	Waters Edge	Selective Cutting

13/3+1200	1270	No name creek	No	Cut & Stump treat	Garlon 3A/Escort or Arsenal	Spot Treat w/in buffer	Waters Edge	Selective Cutting
13/4+265	335	No name creek	No	Cut & Stump treat	Garlon 3A/Escort or Arsenal	Spot Treat w/in buffer	Waters Edge	Selective Cutting
13/5+300	370	No name creek	No	Cut & Stump treat	Garlon 3A/Escort or Arsenal	Spot Treat w/in buffer	Waters Edge	Selective Cutting
14/1+200	500	W. Fork Porter Ck. & Wtld	No	Cut & Stump treat	Garlon 3A/Escort or Arsenal	Spot Treat w/in buffer	Waters Edge	Selective Cutting
14/2+400	500	Wetlands.	No	Cut & Stump treat	Garlon 3A/Escort or Arsenal	Spot Treat w/in buffer	Waters Edge	Selective Cutting
14/4+500	570	Wetlands	No	C, L&S	Garlon 3A/Escort or Arsenal	Spot Treat w/in buffer	Waters Edge	Selective Cutting
14/4+865	935	No name creek	No	Cut & Stump treat	Garlon 3A/Escort or Arsenal	Spot Treat w/in buffer	Waters Edge	Selective Cutting
14/5+75	250	Wetlands	No	C,L&S	Garlon 3A/Escort or Arsenal	Spot Treat w/in buffer	Waters Edge	Selective Cutting
15/2+1065	1135	Bozy Creek	No	Cut & Stump treat	Garlon 3A/Escort or Arsenal	Spot Treat w/in buffer	Waters Edge	Selective Cutting
15/5+330	400	No name creek	No	Cut & Stump treat	Garlon 3A/Escort or Arsenal	Spot Treat w/in buffer	Waters Edge	Selective Cutting
16/1+500	570	No name creek	No	Cut & Stump treat	Garlon 3A/Escort or Arsenal	Spot Treat w/in buffer	Waters Edge	Selective Cutting
16/1+1815	1885	No name creek	No	Cut & Stump treat	Garlon 3A/Escort or Arsenal	Spot Treat w/in buffer	Waters Edge	Selective Cutting
16/5+635	705	No name creek	No	Cut & Stump treat	Garlon 3A/Escort or Arsenal	Spot Treat w/in buffer	Waters Edge	Selective Cutting
17/3+565	635	No name creek	No	Cut & Stump treat	Garlon 3A/Escort or Arsenal	Spot Treat w/in buffer	Waters Edge	Selective Cutting
17/3+735	805	No name creek	No	Cut & Stump treat	Garlon 3A/Escort or Arsenal	Spot Treat w/in buffer	Waters Edge	Selective Cutting

17/3+915	985	No name creek	No	Cut & Stump treat	Garlon 3A/Escort or Arsenal	Spot Treat w/in buffer	Waters Edge	Selective Cutting
17/3+1265	1335	No name creek	No	Cut & Stump treat	Garlon 3A/Escort or Arsenal	Spot Treat w/in buffer	Waters Edge	Selective Cutting
17/5+600	670	No name creek	No	Cut & Stump treat	Garlon 3A/Escort or Arsenal	Spot Treat w/in buffer	Waters Edge	Selective Cutting
17/5+600	700	Wetlands	No	C, L&S	Garlon 3A/Escort or Arsenal	Spot Treat w/in buffer	Waters Edge	Selective Cutting
18/1+535	605	No name creek	No	Cut & Stump treat	Garlon 3A/Escort or Arsenal	Spot Treat w/in buffer	Waters Edge	Selective Cutting
18/2+615	685	No name creek	No	Cut & Stump treat	Garlon 3A/Escort or Arsenal	Spot Treat w/in buffer	Waters Edge	Selective Cutting
18/4+365 Under	435 OS. Elma-S & O-S#3	No name creek	No	Cut & Stump treat	Garlon 3A/Escort or Arsenal	Spot Treat w/in buffer	Waters Edge	Selective Cutting
19/3+512	712	Wetlands	No	Skip				
19/4+100	170	No name creek	No	Cut & Stump treat	Garlon 3A/Escort or Arsenal	Spot Treat w/in buffer	Waters Edge	Selective Cutting
19/4+200	400	Mox Chehalis Creek	EFH	Cut & Stump treat	Garlon 3A/Escort or Arsenal	Spot Treat w/in buffer	Waters Edge	Selective Cutting
19/4+150	750	Wetlands	No	C,L&S	Garlon 3A/Escort or Arsenal	Spot Treat w/in buffer	Waters Edge	Selective Cutting
19/5+900	1100	Sand Creek	EFH	Cut & Stump treat	Garlon 3A/Escort or Arsenal	Spot Treat w/in buffer	Waters Edge	Selective Cutting
20/1+665	735	No name creek, Int	No	Cut & Stump treat	Garlon 3A/Escort or Arsenal	Spot Treat w/in buffer	Waters Edge	Selective Cutting
21/1+735 Diagonal	1500 across R/W	Wetlands	No	C, L&S	Garlon 3A/Escort or Arsenal	Spot Treat w/in buffer	Waters Edge	Selective Cutting
20/2+265	335	No name creek	No	Cut & Stump treat	Garlon 3A/Escort or Arsenal	Spot Treat w/in buffer	Waters Edge	Selective Cutting
20/3+0	70	No name creek	No	Cut & Stump treat	Garlon 3A/Escort or Arsenal	Spot Treat w/in buffer	Waters Edge	Selective Cutting

20/3+800	870	No name creek	No	Cut & Stump treat	Garlon 3A/Escort or Arsenal	Spot Treat w/in buffer	Waters Edge	Selective Cutting
20/3+1215	1285	No name creek	No	Cut & Stump treat	Garlon 3A/Escort or Arsenal	Spot Treat w/in buffer	Waters Edge	Selective Cutting
21/2+715	785	No name creek	No	Cut & Stump treat	Garlon 3A/Escort or Arsenal	Spot Treat w/in buffer	Waters Edge	Selective Cutting
21/4+565 Diagonal	635 Across R/W	Ditch	No	Cut & Stump treat	Garlon 3A/Escort or Arsenal	Spot Treat w/in buffer	Waters Edge	Selective Cutting
22/1+200	450	Pond	No	Cut & Stump treat	Garlon 3A/Escort or Arsenal	Spot Treat w/in buffer	Waters Edge	Selective Cutting
22/2+200 Under	800 SE-S & O-S#3	Wetlands	No	C,L&S	Garlon 3A/Escort or Arsenal	Spot Treat w/in buffer	Waters Edge	Selective Cutting
22/3+500	1000	Wetlands	No	C,L&S	Garlon 3A/Escort or Arsenal	Spot Treat w/in buffer	Waters Edge	Selective Cutting
22/4+925	1125	Chehalis River	T&E/ EFH	Cut & Stump treat	Garlon 3A/Escort or Arsenal	Spot Treat w/in buffer	Waters Edge	Selective Cutting
23/2+615	685	No name creek	No	Skip				
23/2+550	850	Wetlands	No	Skip				
23/3+140	440	Wetlands	No	C, L&S	Garlon 3A/Escort or Arsenal	Spot Treat w/in buffer	Waters Edge	Selective Cutting
23/4+465	535	No name creek	No	Skip				
23/5+230	300	No name creek	No	Cut & Stump treat	Garlon 3A/Escort or Arsenal	Spot Treat w/in buffer	Waters Edge	Selective Cutting
24/1+515	585	No name creek	No	Cut & Stump treat	Garlon 3A/Escort or Arsenal	Spot Treat w/in buffer	Waters Edge	Selective Cutting
24/1+200	400	Wetlands	No	C,L&S	Garlon 3A/Escort or Arsenal	Spot Treat w/in buffer	Waters Edge	Selective Cutting
24/3+1100 Meander	1500 Across R/W	Workman Creek	No	Cut & Stump treat	Garlon 3A/Escort or Arsenal	Spot Treat w/in buffer	Waters Edge	Selective Cutting

25/1+915	985	No name creek	No	Cut & Stump treat	Garlon 3A/Escort or Arsenal	Spot Treat w/in buffer	Waters Edge	Selective Cutting
25/1+985 Parallel	1600 Center of R/W	No name creek	No	Cut & Stump treat	Garlon 3A/Escort or Arsenal	Spot Treat w/in buffer	Waters Edge	Selective Cutting
25/2+465	535	No name creek	No	Cut & Stump treat	Garlon 3A/Escort or Arsenal	Spot Treat w/in buffer	Waters Edge	Selective Cutting
25/3+715	785	No name creek	No	Cut & Stump treat	Garlon 3A/Escort or Arsenal	Spot Treat w/in buffer	Waters Edge	Selective Cutting
25/3+965	1035	No name creek	No	Cut & Stump treat	Garlon 3A/Escort or Arsenal	Spot Treat w/in buffer	Waters Edge	Selective Cutting
25/3+1265	1335	No name creek	No	Cut & Stump treat	Garlon 3A/Escort or Arsenal	Spot Treat w/in buffer	Waters Edge	Selective Cutting
25/5+165	235	No name creek	No	Cut & Stump treat	Garlon 3A/Escort or Arsenal	Spot Treat w/in buffer	Waters Edge	Selective Cutting
25/5+415	485	No name creek	No	Cut & Stump treat	Garlon 3A/Escort or Arsenal	Spot Treat w/in buffer	Waters Edge	Selective Cutting
25/5+865	935	No name creek	No	Cut & Stump treat	Garlon 3A/Escort or Arsenal	Spot Treat w/in buffer	Waters Edge	Selective Cutting
26/1+465	535	No name creek	No	Cut & Stump treat	Garlon 3A/Escort or Arsenal	Spot Treat w/in buffer	Waters Edge	Selective Cutting

3.2 If planning to use herbicides, list locations of any known irrigation source, wells, or springs (landowners maybe able to provide this info if requested).

N/A

3.3 List below the areas that have Threatened or Endangered Plant or Animal Species and the name of the species, and any special measures that need to be taken due to their presence. Attach any BAs, T&E maps, or letters from US Fish and Wildlife.

Span		T&E Species	Method/mitigation or avoidance measures
From	To		
22/4 +0'	22/4+1275'	Bull Trout	Selective cutting of trees in riparian zone and/or cutting trees tops that are within 50' of the conductor at max sag. Shrubs will not be cut that are less than 10' height where the ground to conductor clearance is less than 50' at max sag. Herbicide treatments within 100' up to 1 Yard of waters edge with only practically non toxic (to Aquatic species) chemicals (Garlon 3A / Tahoe 3A or Arsenal). No chemical treatment within one yard of the waters edge. Top trees when shrubs are not present to provide shade and a silt buffer.
22/4	23/1	Bald Eagles	Four Bald Eagles nesting (breeding) territories have been identified to exist in the area of this span, possibly within ¼ mile of the ROW. Bald Eagles may also occur in other areas along the transmission line corridor. Vegetation Management activities will occur outside of the Critical nesting period for Bald Eagles from 2-1 to 8/15. No trees exhibiting the characteristics of nesting or roosting trees for the species will be removed prior to consultation with USFWS.

3.4 List any other measures to be taken for enhancing wildlife habitat or protecting species.

Span		Species	Measures
From	To		
19/4+ 200	400	Essential Fish Habitat (EFH) for Chinook & Coho Salmon. Winter Steelhead Mox Chehalis Creek	Selective cutting of trees in riparian zone and/or cutting trees tops that are within 50' of the conductor at max sag. Shrubs will not be cut that are less than 10' height where the ground to conductor clearance is less than 50' at max sag. Herbicide treatments within 100' up to 1 Yard of waters edge with only practically non toxic (to Aquatic species) chemicals (Garlon 3A / Tahoe 3A or Arsenal). No chemical treatment within one yard of the waters edge. Top trees when shrubs are not present to provide shade and a silt buffer.
19/5+ 900	1100	EFH Coho Salmon Sand Creek	Same treatment as noted in 19/4+ 200 to 400.

23/4+ 925	1125	Essential Fish Habitat (EFH) for Chinook & Coho Salmon. Winter Steelhead and Chum Salmon Chehalis River.	Same treatment as noted in 19/4+ 200 to 400.

3.5 List any visually sensitive areas and the measures to be taken at these areas.

N/A

3.6 List areas with cultural resources and the measures to be taken in those areas.

Span		Describe sensitivity	Method/mitigation measures
From	To		
6/1	26/3	Cultural Sites	The Chehalis Tribe does not know of any cultural sites on this transmission corridor. If a site is discovered during the course of vegetation control, work will be stopped in the vicinity and the local tribe(s) will be contacted as well as the BPA Environmental Specialist.

3.7 List areas with steep slopes or potential erosion areas and the measure and methods to be applied in those areas.

Span		Describe sensitivity	Method/mitigation measures
To	From		
11/3 +475	1475	Steep Slopes	Selective cutting of trees in the draw to maintain soil stability.
12/3+ 400	1100	Steep Slopes	Selective cutting of trees in the draw to maintain soil stability.
14/1+ 200	500	Steep Slopes	Selective cutting of trees in the draw to maintain soil stability.
15/2+ 800	1300	Steep Slopes	Selective cutting of trees in the draw to maintain soil stability.
20/1+ 735	1500	Steep Slopes	Selective cutting of trees in the draw to maintain soil stability.
20/3+ 600	1909	Steep Slopes	Selective cutting of trees in the draw to maintain soil stability.
21/2+ 600	825	Steep Slopes	Selective cutting of trees in the draw to maintain soil stability.
21/4+ 565	635	Steep Slopes	Selective cutting of trees in the draw to maintain soil stability.
24/3+ 1250	2070	Steep Slopes	Selective cutting of trees in the draw to maintain soil stability.
25/1+ 800	1600	Steep Slopes	Selective cutting of trees in the draw to maintain soil stability.

25/3+550	1100	Steep Slopes	Selective cutting of trees in the draw to maintain soil stability.
26/1+465	535	Steep Slopes	Selective cutting of trees in the draw to maintain soil stability.

3.8 List areas of spanned canyons and the type of cutting needed.

Span		Methods, cutting
From	**To**	
11/3+475	1475	Ground to conductor clearance is greater than 125', selective cutting of conifer trees when the tops of the trees are within 50' of the conductor at max sag.
12/3+400	1100	Selectively cut conifer trees when the tops of the trees are within 50' of the conductor at max sag.
14/1+200	500	Selectively cut conifer trees when the tops of the trees are within 50' of the conductor at max sag.
15/2+800	1300	Selectively cut conifer trees when the tops of the trees are within 50' of the conductor at max sag.
20/1+735	1500	Selectively cut conifer trees when the tops of the trees are within 50' of the conductor at max sag.
20/3+600	1909	Selectively cut conifer trees when the tops of the trees are within 50' of the conductor at max sag.
21/2+600	825	Selectively cut conifer trees when the tops of the trees are within 50' of the conductor at max sag.
21/4+565	635	Selectively cut conifer trees when the tops of the trees are within 50' of the conductor at max sag.
24/3+1250	2070	Selectively cut conifer trees when the tops of the trees are within 50' of the conductor at max sag.
25/1+800	1600	Selectively cut conifer trees when the tops of the trees are within 50' of the conductor at max sag.
25/3+550	1100	Selectively cut conifer trees when the tops of the trees are within 50' of the conductor at max sag.
26/1+465	535	Selectively cut conifer trees when the tops of the trees are within 50' of the conductor at max sag.

4. DETERMINE VEGETATION CONTROL METHODS

4.1 List Methods that will be used in areas not previously addressed in steps above.

Span		Methods, including herbicide active ingredient, trade name, application technique
To	**From**	
6/1	26/3	For non-sensitive areas (spans) cut stump/basal treatment with 25% Garlon 4/Tahoe 4E and 75% Forest Crop Oil (FCO). A 50/50 % mixture of Garlon 3A/Tahoe 3A and/or 5% of Arsenal and water for stump treatment will be used in the non-T&E listed creek riparian zones and within the 100' buffer, up to one yard of the high water mark of a T&E listed creek. A late spring and early summer follow-up foliar treatment with Garlon 3A/Tahoe 3A and Escort on all hardwood species except the use of Arsenal on Big Leaf Maple, Wild Cherries and Cottonwood sprouting stumps and/or brush in non-T&E/EFH buffers. Initially, foliar treat Scotch broom as well as a follow up treatment in the spring-summer. Basal treatment is essential for Big Leaf Maple, Cottonwood and Wild Cherries sprouts, outside the buffer zones, rather than foliar treatment in order to deliver enough herbicide product to the roots to cause mortality of the target trees.

5. DETERMINE DEBRIS DISPOSAL AND REVEGETATION

5.1 Describe the debris disposal methods to be used and any special considerations.

Debris Disposal:

Chip (Mechanical brush disposal unit cuts brush into chips 4 in. or less in diameter, and spread over ROW, piled on ROW, or trucked off site. Trunks too large for the chipper are limbed and the limbs chipped. Trunks are placed in rows along the edge of the right-of-way or scattered, as the situation requires.)

Lop and Scatter (Branches of a fallen tree are cut off (lopped) by ax or chainsaw, so the tree trunk lies flat on the ground. The trunks are occasionally cut in 1-to-2-m (4-to-8-ft.) lengths. The cut branches and trunks are then scattered on the ground, laid flat, and left to decompose.)

Mulch (Mulching is a debris treatment that falls between chipping and lop-and-scatter. The debris is cut into 1-to-2-ft. lengths, scattered on the right-of-way and left to decompose. This method is used when terrain and conditions do not allow the use of mechanical chipping equipment.)

5.2 List areas of reseeding or replanting (those areas not already described in steps 1, 2, or 3).

N/A

Native grasses and vegetation are present on the entire right-of-way that will seed into the areas that will have lightly disturbed soil predominately located on the right-of-way roads. BPA expects 2-3 vehicles of the brush contractor and 1 contract inspector's vehicle will be present on the site. A brush machine will mulch the structure sites and right-of-way roads where Scotch Broom and Black Berries are present.

5.3 If not using native seed/plants, describe why.

N/A

5.4 Describe timing and any follow-up that will need to take place to ensure germination/success of seeding/planting.

Monitoring of the success of the brush-cutting program will begin the spring in which evaluation of soil erosion as a result of the brush-cutting program will be made. If grass seeding is necessary, native grass seed will be applied.

6. DETERMINE MONITORING NEEDS

6.1 Describe the follow-up/monitoring cycle that will be used to evaluate the effectiveness of the vegetation control methods used.

Monitoring of the effectiveness of the herbicide treatment will begin in the spring and follow up treatment of cut stump/basal or foliar treatment of target vegetation. The mixture of the product is 25% Garlon 4/Tahoe 4E and 75% FCO for stump treatment or 97% water, 3% Garlon 3A Tahoe 3A with 2 oz/ac. of Escort or 5% of Arsenal for foliar treatment. Depo-RTU will be utilized to reduce drift when necessary.

6.2 Describe any follow-up or monitoring needed to determine if mitigation measures were effective.

Annually patrol the transmission line by the line crew and the Natural Resource Specialist will periodically monitor the right-of-way for effective mitigation measures.

7. PREPARE APPROPRIATE ENVIRONMENTAL DOCUMENTATION

7.1 Describe any potential project impacts or project work that are different than those disclosed in the Transmission System Vegetation Management Program EIS. Describe how those differences impact natural resources and if the differences are "substantial".

All proposed brush cutting and chemical treatment activities on this corridor is noted in the EIS.

7.2 Is there a need for additional NEPA documentation (i.e. Forest Service requirement, Record of Decision, supplemental EIS)? If so, attach.

No